3 Background Data: Truckee Tahoe Airport and Environs

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INTRODUCTION

Situated in the Martis Valley at an elevation of 5,900 feet, Truckee Tahoe Airport is a major regional general aviation facility serving the Town of Truckee, surrounding Sierra Nevada Mountain resort communities and ski areas, and the Lake Tahoe Basin seven miles to the south. Major facilities include two intersecting runways along with aircraft hangars, apron areas, and other supporting uses. The primary runway is 7,000 feet in length and oriented northwest/southeast and the secondary runway, oriented northeast/southwest, is 4,650 feet long. In total, the airport occupies nearly 1,000 acres of land.

The airport is owned and operated by the Truckee Tahoe Airport District, a bi-county special district within the counties of Nevada and Placer. The District is governed by a five-member board elected by residents of the district and is supported by local property taxes.

The airport property straddles the boundary between Nevada and Placer counties. The Town of Truckee surrounds the airport on the north and west, but the airport property is not within the town limits. In addition to these three local land use jurisdictions, major portions of the airport environs are under the control of the federal government; specifically, the U.S. Army Corps of Engineers (Martis Creek Lake National Recreation Area) and the U.S. Forest Service (Tahoe National Forest).

When the airport was built in the early 1960s, little development existed in the surrounding area except in Truckee itself. The town remained an unincorporated community of Nevada County until 1993. Since that time, several large resort communities have been developed around the edges of the Martis Valley. Local planning documents estimate that about half of the homes in these communities are occupied year-round and the remainder seasonally. Major portions of the area consist of large land holdings, many of which are proposed for residential development.

The exhibits on the following pages of this chapter summarize information about the Truckee Tahoe Airport and surrounding communities. Together with state laws and guidelines, this information served as the basis for preparation of this *Truckee Tahoe Airport Land Use Compatibility Plan.*

Exhibits 3A through 3I focus on the airport facilities and use, including noise impacts. Exhibits 3A and 3B describe and depict the existing and planned airport facilities.

The next group of exhibits portrays airport noise impact data. Exhibit 3C summarizes the data used in the noise contour calculations conducted for the compatibility planning study. Exhibits 3D through 3G depicts four sets of noise contours resulting from these inputs. Contours were calculated for 2002-03 and long-range (beyond 20 years) future activity levels. For each of these time frames, assessments were made of the noise impacts of both an average day of the year and an average day of the peak (summer) season. The contours depicted in Exhibit 3G, the future noise impacts for an average day of the peak season, are the ones used for the policy purposes of this plan. All noise contour calculations were done using the Federal Aviation Administration's Integrated Noise Model (INM) version 6.1. Surrounding high terrain was taken into account in the noise impact calculations—where the terrain is higher than the airport elevation, aircraft are lower to the ground than they would be with level terrain and consequently the overflights generate more noise.

Note that, for the purposes of this *Compatibility Plan*, the long-range activity levels used in the noise impact modeling are significantly higher than the forecasts in the 2000 *Airport Master Plan*. This increase arises partly because the airport's current activity is estimated to be well above the level anticipated by the *Master Plan* and additionally because the *Compatibility Plan* time horizon is longer than that of the *Master Plan*. The resulting noise impacts, however, are lower in most locations than the *Master Plan* projected. The *Compatibility Plan* assumption that the noisiest jet aircraft will no longer be operating in the long term appears to be the primary explanation for this difference. Appendix H contains additional discussion of these differences and assesses the effects that different forecasts and other assumptions have on the noise contours.

Exhibit 3H illustrates the locations of aircraft flight tracks as assumed for the purposes of the noise contour modeling. For the most heavily used departure and flight training tracks, the flight track dispersion capabilities of the noise model were utilized. This function allows the model to assume that a portion of aircraft tracks are to the left or right of the predominant central track. For departures from Runway 28 (toward the northwest), the airport's defined noise-abatement flight track along the Highway 267 bypass was modeled as the predominant track, representing some 40% of the departures from that runway. The sub-track farthest to the left, representing about 7% of the total, is essentially a straight-out departure track.

The use of sub-tracks in the noise modeling explicitly acknowledges that all aircraft do not precisely fly the defined noise-abatement routes. Because no radar coverage is available for the Truckee Tahoe Airport vicinity, no data regarding flight track locations exists. Anecdotal information from airport staff and pilots—contradicted by some residents of the community—suggests that most aircraft essentially follow the noise-abatement routes. The noise contours used in this *Compatibility Plan* rely heavily upon this assumption. Included in Appendix H is a set of contours based upon an alternative assumption that the predominant flight track is straight out.

The Airport Land Use Commission has no authority to dictate to the airport or to pilots where aircraft should fly, let alone to enforce use of any such flight routes. Nevertheless, the ALUC encourages the airport to take all reasonable steps to promote pilot knowledge of and adherence to the noise abatement routes.

Exhibit 3I maps a variety of information that led to the delineation of compatibility zones set forth in Figure 2A. In addition to noise and flight track locations, this map illustrates a set of accident risk contours. Taken from the 2002 *California Airport Land Use Planning Handbook* published by the California Division of Aeronautics—the basic guiding document for preparation of airport land use compatibility

plans—these risk contours show the areas most susceptible to general aviation aircraft accidents. The contours are based upon accident data from airports throughout the United States and thus were used only as general guidance in the preparation of the compatibility zones for the Truckee Tahoe Airport. The effects of Truckee Tahoe Airport's specific flight track locations compared to the flight tracks at average airports were considered, for example.

Information regarding land uses in the airport environs is portrayed in Exhibits 3J through 3N. The status of local land use plans and compatibility planning measures is outlined in Exhibit 3J. Exhibits 3K and 3L, respectively, depict existing airport area land uses and the future uses indicated in the general plans of the three local land use jurisdictions (in both cases, as of 2003). A comparison between these two maps results in Exhibit 3M. This map shows where development is currently planned in the airport vicinity, but does not now exist. A final exhibit, 3N, evaluates the local land use plans to determine the extent to which they are consistent or conflict with the land use compatibility criteria contained in this *Compatibility Plan*.